IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Philippe Lafon	§	Confirmation No.:	3722
		§		
Serial No.:	10/823,183	§	Examiner:	Jwalant B. Amin
		§		
Filed:	April 13, 2004	§	Group Art Unit:	2676
		§		
For:	METHOD, AND RELATED SYSTEM, FOR OVERLAYING GRAPHICS OBJECT ON A DIGITAL PICTURE	§ § § §	Attorney Docket No.:	TI-37335 (1962-11200)

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: November 13, 2008

Sir:

Appellant hereby submit this Appeal Brief in connection with the above-identified application. A Notice of Appeal is filed concurrently herewith.

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I. REAL PARTY IN INTEREST

The real party in interest is Texas Instruments Incorporated, a Delaware corporation, having its principal place of business in Dallas, Texas. The Assignment from the inventor to Texas Instruments Incorporated was recorded on April 13, 2004, at Reel/Frame 015219/0202.

II. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Originally filed claims:	1-30.
Claim cancellations:	18-21 and 28-30.
Added claims:	None.
Presently pending claims:	1-17 and 22-27.
Presently appealed claims:	1-17 and 22-27.

IV. STATUS OF THE AMENDMENTS

No claims were amended after the Final Office Action dated September 17, 2008.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The specification is directed to a method and related system, for overlaying a graphics object on a digital picture. **{Specification Title}**.[1] At least some of the illustrative embodiments are methods as in claim 1:

1. A processor-based method comprising:
combining a digital graphics object and a digital picture using weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values having a value indicating transparency, **{13-14, [0040], lines 1-13, Figure 7, elements 714 and 716}** while both the digital graphics object and the digital picture are in a compressed format; and **{10, [0033], lines 1-6, Figure 7, elements 704}**
displaying the combined digital graphic object and digital picture. **{8, [0028], lines 5-7, Figure 1, element 28}**

Other embodiments are systems as in claim 12:

12. A system comprising:
a processor; **{7, [0027], lines 1-3, Figure 6, elements 20}**
a memory coupled to the processor; and **{7, [0028], lines 1-2, Figure 6, elements 22}**
wherein the processor, executing a program, overlays a digital graphics object and a digital picture **{8, [0029], lines 7-10, Figure 6, elements 20}** using a weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values that have a value that indicates transparency, **{13-14, [0040], lines 1-13, Figure 7,**

[1] For consistency, citations to the Specification will take the form **{[page], [paragraph number], lines [lines within the paragraph]}.**

> **elements 714 and 716}** while both the digital graphics object and the digital picture are in compressed format. **{8, [0028], lines 5-7, Figure 1, element 28}**

Yet still other embodiments are computer readable mediums as in claim 22:

> 22. A computer readable medium storing a program that, when executed by a processor, causes the processor to: overlay a graphics object onto a picture using **{8, [0029], lines 7-10, Figure 6, elements 20}** a weight factor proportional to a plurality of luminance values in the graphics object with each of the plurality of luminance values that have a value that indicates transparency, **{13-14, [0040], lines 1-13, Figure 7, elements 714 and 716}** while both the graphics object and the picture are in a compressed format. **{8, [0028], lines 5-7, Figure 1, element 28}**

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-4, 6-12, 16-17, and 22-27 are obvious under 35 U.S.C. §103(a) over Horton (U.S. Pat. No. 5,969,770) in view of MacInnis et al. (U.S. Pat. No. 6,853,385).

Whether claim 5 is obvious under 35 U.S.C. §103(a) over Horton, MacInnis and Chauvel et al. (U.S. Pat. No. 6,369,855).

Whether claim 13 is obvious under 35 U.S.C. §103(a) over Horton, MacInnis and Yahav et al. (U.S. Pat. No. 6,057,909).

Whether claims 14 and 15 are obvious under 35 U.S.C. §103(a) over Horton, MacInnis and Callway et al. (Pub. No. 2003/0027517).

VII. ARGUMENT

A. Section 103 Rejections over Horton and MacInnis

1. Claims 1-4, 6-12, 16-17 and 22-27

Claims 1-4, 6-12, 16-17 and 22-27 stand rejected as allegedly obvious over Horton and MacInnis. Claim 1 is representative of this grouping of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 USC § 282 shall apply to each of these claims individually.

MacInnis is directed to a video, audio and graphics decode, and composite display system.[2] In particular, MacInnis appears to disclose a graphics display system which includes blending of plurality of graphics images based on alpha values.[3] The alpha values are derived for each pixel in the graphics images using three different methods such as an alpha value from a key, an alpha value from the Y component, and an alpha value from a lookup table.[4] In particular, the method for deriving alpha value from a key comprises comparing the color components of the pixel to a predefined

[2] MacInnis Title.

[3] MacInnis Col. 46, lines 57-63.

value, and the alpha value for the pixel is set to 0 or 1 based on the comparison.

> The chroma key and luma key alpha derivation method used in the described embodiment typically are used to derive a pixel's alpha value by comparing the color componenet(s) of the pixel to a predefined value(s). If the comparison is positive (in range or compared) then alpha value for the pixel is 0 (transparent) otherwise it is 1 (opaque).[5]

Similarly, the method for deriving alpha value from the Y component comprises determining if the value of Y component of the pixel is within a predetermined range, and setting the alpha value to 0 or 1 based on the determining.

> The luma key preferably is used with the graphics having YUV 4:2:2 format. The legal range of the Y component of a YUV 4:2:2 image typically is between 16 and 235. When the Y component of graphics image is set to zero, which may be not happen in the real world, then the pixel is typically set to be transparent, otherwise the pixel is typically set to be opaque.[6]

Thus, In the particular method MacInnis appears to teach deriving alpha values for each pixel in the graphics image by comparing the Y (luminance) value of the pixel to a predetermined value.

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[4] MacInnis Col. 112, lines 16-23.

[5] MacInnis Col. 112, lines 32-37.

[6] MacInnis Col. 112, lines 47-53.

Representative claim 1, by contrast, specifically recites "combining a digital graphics object and a digital picture using weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values having a value indicating transparency." Appellant submits that Horton and MacInnis do not teach or fairly suggest such a method. MacInnis teaches selecting an alpha value for each pixel in the graphics object based on a single Y (luminance) value of the pixel. MacInnis fails to teach a weight factor proportional to a plurality of luminance values in the graphics object that indicate transparency. Thus, even if the teachings of Horton are precisely as the Office Action suggests (which Appellant does not admit), Horton and MacInnis still fail to teach or fairly suggest "combining a digital graphics object and a digital picture using **weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values having a value indicating transparency.**"

In the *Response to Arguments* section of the Final Office Action dated September 17, 2008, the Office Action states "(... Y component having a value of zero indicates transparency and corresponds to one of the luminance value; Y component having a value other than zero indicates the

pixel is opaque and corresponds to a different luminance value; thus '0' or 'any value other than zero' corresponds to the plurality of luminance values, where each of the plurality of luminance values has a value that indicates transparency of the pixel; ...)."[7] Appellant respectfully traverses. MacInnis teaches that the alpha value of a pixel is set to 0 or 1 (transparent or opaque) based on the value of the luminance component of the pixel.

> When the Y component of graphics image is set to zero, which may be not happen in the real world, then the pixel is typically set to be transparent, otherwise the pixel is typically set to be opaque.[8]

Thus, McInnis teaches selecting one alpha value per pixel of the graphics object. Further, Appellant submits that even if the alpha value of MacInnis is equivalent to the weight factor (which the Appellant does not admit), MacInnis still does not teach that the alpha value is determined based on a plurality of luminance values. MacInnis teaches that the alpha value for each pixel is determined based on a single luminance value for the pixel. A single pixel cannot have more than one luminance value. Accordingly, Appellant respectfully submit that Office Action's interpretation of "the luminance value indicating transparency and the luminance value indicating non-

[7] Final Office Action dated September 17, 2008, pages 2-3.

transparency are two different values; these luminance values correspond to the plurality of luminance values"[9] is incorrect. MacInnis teaches that each pixel has only one luminance value that dictates whether the alpha value is 0 or 1. By contrast, representative claim 1 recites "combining a digital graphics object and a digital picture using **weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values having a value indicating transparency**."

Based on the foregoing, Appellant respectfully request that the rejection of this grouping be reversed, and the claims set for issue.

B. Section 103 Rejections over Horton, MacInnis and Chauvel

1. Claim 5

Claim 5 stands rejected as allegedly obvious over Horton, MacInnis and Chauvel. Claim 5 is allowable for at least the same reasons as delineated in Sections VII(A)(1).

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[8] MacInnis Col. 112, lines 47-53.

[9] Final Office Action dated September 17, 2008, page 3.

C. Section 103 Rejections over Horton, MacInnis and Yahav

1. Claim 13

Claim 13 stands rejected as allegedly obvious over Horton, MacInnis and Yahav. Claim 13 is allowable for at least the same reasons as delineated in Sections VII(A)(1).

D. Section 103 Rejections over Horton, MacInnis and Callway

1. Claims 14 and 15

Claims 14 and 15 stand rejected as allegedly obvious over Horton, MacInnis and Callway. Claims 14 and 15 are allowable for at least the same reasons as delineated in Sections VII(A)(1).

E. Conclusion

For the reasons stated above, Appellant respectfully submit that the Examiner erred in rejecting all pending claims. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of

claims) are hereby authorized to be charged to the Texas Instruments Incorporated's Deposit Account No. 20-0668.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (Previously Presented) A processor-based method comprising:

combining a digital graphics object and a digital picture using weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values having a value indicating transparency, while both the digital graphics object and the digital picture are in a compressed format; and

displaying the combined digital graphic object and digital picture.

2. (Original) The processor-based method as defined in claim 1 further comprising, prior to combining, compressing the digital graphics object to be in the compressed format.

3. (Original) The processor-based method as defined in claim 2 wherein combining further comprises combining a chrominance value in the digital graphics object with a chrominance value in the digital picture based on a weight factor, the weight factor proportional to a number of luminance values in the digital graphics object having values indicating transparency.

4. (Original) The processor-based method as defined in claim 3 further comprising:

calculating the weight factor during compressing; and

storing the weight factor within the digital graphics object.

5. (Original) The processor-based method as defined in claim 4 further comprising storing the weight factor in the least significant bits of the chrominance value.

6. (Original) The processor-based method as defined in claim 2 further comprising compressing the digital graphics object in 4:4:4 space to one of 4:2:2 space or 4:2:0 space.

7. (Original) The processor-based method as defined in claim 1 wherein combining further comprises combining a chrominance value in the digital graphics object with a chrominance value in the digital picture based on a weight factor, the weight factor proportional to a number of luminance values in the digital graphics object that indicate transparency.

8. (Original) The processor-based method as defined in claim 7 further comprising calculating the weight factor contemporaneously with combining.

9. (Original) The processor-based method as defined in claim 7 further comprising, prior to combining, reading the weight factor from the digital graphics object.

10. (Original) The processor-based method as defined in claim 1 further comprising combining while both the digital graphics object and the digital picture are in a 4:2:2 space format.

11. (Original) The processor-based method as defined in claim 1 further comprising combining while both the digital graphics object and the digital picture are in a 4:2:0 space format.

12. (Previously Presented) A system comprising:

a processor;

a memory coupled to the processor; and

wherein the processor, executing a program, overlays a digital graphics object and a digital picture using a weight factor proportional to a plurality of luminance values in the digital graphics object with each of the plurality of luminance values that have a value that indicates transparency, while both the digital graphics object and the digital picture are in compressed format.

13. (Original) The system as defined in claim 12 further comprising a charge coupled device (CCD) array coupled to the processor, and wherein the processor, executing a program, acquires the digital picture using the CCD array.

14. (Original) The system as defined in claim 12 further comprising a radio transceiver coupled to the processor, and wherein the processor, executing

a program, receives at least one of the digital graphics object or the digital picture through the wireless transceiver.

15. (Original) The system as defined in claim 12 further comprising a radio transceiver coupled to the processor, and wherein the processor, executing a program, transmits the digital picture created by the overlaying of the digital graphics object and the digital picture using the transceiver.

16. (Original) The system as defined in claim 12 wherein the processor, executing the program, overlays the digital graphics object and the digital picture while each of the digital graphics object and the digital picture are in a 4:2:2 space format.

17. (Original) The system as defined in claim 12 wherein the processor, executing the program, overlays the digital graphics object and the digital picture while each of the digital graphics object and the digital picture are in a 4:2:0 space format.

18-21. (Canceled)

22. (Previously Presented) A computer readable medium storing a program that, when executed by a processor, causes the processor to: overlay a graphics object onto a picture using a weight factor proportional to a plurality of luminance values in the graphics object with each of the plurality of luminance values that have a value that indicates transparency, while both the graphics object and the picture are in a compressed format.

23. (Previously Presented) The computer readable medium as defined in claim 22 wherein when the processor overlays, the program causes the processor to overlay a chrominance value in the graphics object with a chrominance value onto the picture based on the weight factor, the weight factor proportional to a number of luminance values in the graphics object having values that indicate transparency.

24. (Previously Presented) The computer readable medium as defined in claim 23 wherein when the processor overlays, the program causes the processor to calculate the weight factor contemporaneously with the overlay.

25. (Previously Presented) The computer readable medium as defined in claim 23 wherein the program further causes the processor to read the weight factor from the graphics object prior to the overlay of the chrominance values.

26. (Previously Presented) The computer readable medium as defined in claim 22 wherein when the processor overlays, the program causes the

processor to overlay while both the digital graphics object and the digital picture are in a 4:2:2 space format.

27. (Previously Presented) The computer readable medium as defined in claim 22 wherein when the processor overlays, the program causes the processor to overlay while both the digital graphics object and the digital picture are in a 4:2:0 space format.

28-30. (Cancelled)

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.